REMARKS

CLAIMS REJECTIONS – 35 U.S.C. §112

Claims 1-18 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In response, the word "improved" has been removed from all claims and from the Abstract.

CLAIMS OBJECTIONS

Claim 13 was objected to under 37 C.F.C. 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. In response, Claim 13 now depends from Claim 12.

CLAIMS REJECTIONS – 35 U.S.C. §103

Claims 1-18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu (6,245,474) in view of Combes (5,714,299). In response, please note the attached Declaration pursuant to 35 C.F.R. 1.132 of Dr. Samir Kumar, who is a manager that supervises Xerox scientists within the work area of Mr. Proper and who is familiar with the work resulting in the '474 and the '299 patents. As explained by Dr. Kumar, the adhesion values claimed in the present Application cannot be obtained using prior art blending processes such as those described n the '474 and '299 patents. High intensity blending of the type described in the present Application is needed to obtain the adhesion values listed in the claims.

The First Office Action makes the unsupported statement that even though Hsu does not teach the size of toner surface additives, "It would have been obvious to one of ordinary skill in the art to use the surface additive toners of a

known size as taught by Combes in the toner composition taught by Hsu because of the expectation of similar results due to well known surface additives used for the same purpose of charging characteristics." The First Office Action thus reasons correctly that it is desirable to increase the amount of surface additives that adhere to toner composite particles. However, until the present invention offering high intensity blending, it has not been possible for additive particles to be impacted sufficiently to adhere with the AAFD percent values claimed in Claim 1. This need for high intensity blending has been explained by Dr. Kumar, and this explanation effectively rebuts the unsupported statement in the First Office Action.

In sum, Claim 1 is allowable over Hsu's '474 and Combes' '299 patents, and the unsupported assertion of the First Office Action regarding the applicability of Hsu and Combes to the present invention has been definitively rebutted. Since all claims in the Application depend directly or indirectly from Claim 1, all claims presently in the Application are also allowable.

The application and claims are believed to be in a condition for allowance in their present form and which allowance is respectfully requested.

In the event the Examiner considers personal contact advantageous to the disposition of this case, the Examiner is hereby authorized to call Applicant's Attorney, Robert Thompson, at Telephone Number (585) 423-2050, Rochester, New York.

Respectfully submitted,

Richard F. Spooner
Attorney for Applicant
Registration No. 43,928

RFS/pn
Xerox Corporation
Xerox Square 20A
Rochester, New York 14644

VERSION WITH MARKINGS TO SHOW CHANGES MADE:

IN THE SPECIFICATION:

Please substitute the amended paragraph for the pending paragraph on page 33, beginning at line 1 as follows:

A[n improved] toner and process for making the [improved process, the improved] toner [comprising a colorant; a toner resin mixed with the colorant,] wherein each combined resin and colorant [particle] composite has an average size [greater] less than [4] about 15 microns[;] and wherein surface additive particles averaging [greater] less than about 50 [30] nanometers in size [, wherein the amount of such surface additives] average greater than two (2) percent of the combined weight of resin and colorant in the toner and wherein the Additive Adhesion Force Disribution percent value after 12 kilojoules of energy is greater than 40 percent. [Also, an improved toner made by an improved process, comprising: mixing a toner resin and a colorant; extruding the resin and colorant mixture; attriting the resin and colorant mixture; classifying the attrited particles into particles averaging 4 to 10 micron in size; and blending sufficient surface additive particles and the classified particles in a high intensity blender for at least 10 minutes such that the weight of attached surface additives is greater than four (4) of the weight of the classified particles.]

IN THE CLAIMS:

Please substitute amended claims 1-8, and 10-18 for pending claims 1-8, and 10-18 as follows:

1) (Amended) A[n improved] toner, comprising:

(a) a colorant;

(b) a toner resin mixed with the colorant, wherein each combined resin and colorant composite [particle] has an average diameter size of equal to or less than about 15 microns [greater than 4 microns]; and

(c) surface additive particles averaging less[greater] than about 50[30] nanometers in diameter size, wherein the amount of such surface additives average equal to or greater than about two (2) percent of the combined weight of resin and colorant in the toner and wherein the Additive Adhesion Force Distribution percent value after 12 kilojoules of energy is greater than 40 percent.

2) (Amended) The [improved] toner of **claim 1**, wherein the toner resin further comprises internal additives.

3) (Amended) The [improved] toner of **claim 1**, wherein the combined resin and colorant composite [particle] has an average diameter size in the range of about 4 to about 10 microns.

4) (Amended) The [improved] toner of **claim 1**, wherein the amount of surface additives average greater than about three (3) percent of the combined weight of resin and colorant in the toner.

5) (Amended) The [improved] toner of **claim 1**, wherein the amount of surface additives average greater than about four (4) percent of the combined weight of resin and colorant in the toner

6) (Amended) The [improved] toner of **claim 1**, wherein the Addjtive Adhesion Force Distribution value [AAFD] percent value after 10 minutes of sonification and 12[kJ] kilojoules of energy is greater than 40 percent.

7) (Amended) The [improved] toner of **claim 1[6]**, wherein the Additive Adhesion Force Distribution percent [AAFD] values were obtained using four (4) 5/8 inch horns emitting at a frequency of 19.95 [kHz] kiloherz from a distance of approximately 2 mm.

8) (Amended) The [improved] toner of **claim 1**, wherein the toner is blended for less than 10 minutes.

10) (Amended) The [improved] toner of **claim 1**, wherein the Additive Adhesion Force Distribution [AAFD] percent value after [5 minutes of sonification and] 6 kilojoules [6kJ] of energy is greater than 60 percent.

11) (Amended) The [improved] toner of **claim 1**, wherein the Additive Adhesion Force Distribution [AAFD] percent value after [2.5 minutes and 3kJ]3 kilojoules of energy is greater than 80 percent.

12) (Amended) The [improved toner of]**claim 1**[2], wherein:

(a) the combined resin and colorant composite[particle] has an average size in the range of about 4 to about 10 microns; and

(b) the surface additive particles average between 30 and 50 nanometers in diameter size and wherein the amount of such surface additives average greater than four (4) percent of the combined weight of resin and colorant in the toner[; and

(c) the AAFD percent value after 10 minutes of sonification and 12kJ of energy is greater than 40 percent].

13) (Amended) The [improved] toner of **claim 12**[13], wherein the Additive Adhesion force Distribution percent[AAFD] values were obtained using four (4) 5/8 inch horns emitting at a frequency of 19.95 kHz from a distance of approximately 2 mm.

14) (Amended) The [improved] toner of **claim 12**[13], wherein the Additive Adhesion Force Distribution percent[AAFD] value after [5 minutes of sonification and] 6kJ of energy is greater than 60 percent.

15) (Amended) An [improved] toner made by an improved process, comprising:

(a) mixing a toner resin and a colorant;

(b) extruding the resin and colorant mixture;

(c) attriting the resin and colorant mixture;

(d) classifying the attrited particles into composites[particles] averaging about 4 to about 10 micron in size; and

(e) blending sufficient surface additive particles and the classified particles in a high intensity blender for at least 10 minutes such that the weight of surface additives that become attached is greater than three (3) percent of the weight of the classified particles.

16) (Amended) The [improved] toner of **claim 15**, wherein the weight of attached surface additives is greater than four (4) percent of the weight of the classified particles.

17) (Amended) The [improved] toner of **claim 15**, wherein the blending is intense enough to yield Additive Adhesion Force Distribution[AAFD] percent values after [10 minutes of sonification and]12kJ of energy greater than 40 percent.

18) (Amended) The [improved] toner of **claim 15**, wherein the blending is intense enough to yield Additive Adhesion Force Distribution[AAFD] percent values after [5 minutes of sonification and]6kJ of energy [is]greater than 60 percent.

Claims 19-20 have been withdrawn.

Claim 21 is a new claim.